REMARKS

The Office Action mailed August 24, 2010, has been reviewed and carefully considered. Reconsideration of the above-identified application, in view of the following remarks, is respectfully requested.

Claims 11-25 are pending in this application. Claims 11, 14, 17 and 18 have been amended. Support for the changes to claims 11 and 18 may be found on page 7 of the Specification and claim 17. No new matter has been entered.

Upon careful review of the Office Action dated August 24, 2010, including the referenced patents and patent applications, Applicants respectfully disagree and maintain the uniqueness, non-obviousness, and improvement of the present patent application over the prior art.

Because the arguments submitted on July 23, 2010, were considered persuasive in the Examiner's Response to Arguments, dated August 24, 2010 (*see*, page 2), and new grounds for rejection have been made by the Examiner, the instant response will focus on the Examiner's new grounds for rejection.

Regarding Claim 11 and the claimed ad center having multi-directional communication links, Applicants wish to point out that said plurality of intelligent control modules (ICMs) receive each user's personal and local attributes; said ad center includes a repository unit for storing user information and ad agency or advertiser information; at least one of said ICM and ad centers is configured to analyze ads, ad agencies, advertisers, and user info, and to select personalized and localized ad content for each ICM, based on its corresponding attributes, to transmit user's personal and local attributes, ad content, programming content, user ad search, and follow up requests, and software and firmware updates, wherein users can follow-up and search for additional ad information through one or more telecommunication sources connected to their ICM. The

Examiner agrees that *Thukral* does not explicitly disclose an ad center with ICMs and references a system disclosed by U.S. Patent Publication No. 2002/0124253, to *Eyer et al.*, as having a similar ad center and ICMs.

After careful review of the system disclosed by *Eyer et al.*, Applicants respectfully disagree because there are significant differences (uniqueness) between the system disclosed in Claim 11 and what is disclosed by *Eyer et al.* For example, the ad center disclosed in Claim 11 of the present patent application can be an independent unit operated outside of a service provider with interfaces to the service providers (*see*, Claim 14). In contrast, in *Eyer et al.*, the ad center is part of the service provider (*see*, FIG. 2), with the television service provider creating customized and directed advertising directed to that user (*see*, paragraph 0008). This difference is important because the independent ad center of the present patent application can service both T.V. users by interfacing with the television service providers and computer and Internet users via ICM. In contrast, with the ad center tightly coupled inside a T.V. service provider, as disclosed by *Eyer et al.*, the system can only service T.V. users and interface with T.V. service providers. The separation of the ad center from a T.V. service provider offers additional unique interfaces and features as compared to the system disclosed by *Eyer et al.*

Claim 14 has been amended to clarify that an interface is provided within the Ad Center and each of the service providers. In Eyers, the Ad Server 46 and Ad Database 48 are included as components within the Service Provider 20. [0015]. The Service Provider 20 of Eyers is equivalent to the Content Provider 102 of Thukral. Therefore, when combining these references, Eyers teaches to include the Ad Server and Ad Database within the Content Provider. There would be no need to provide interfaces for the service providers, as recited in claim 14, if these components are already integrated.

In other words, Eyer only provides that "the television service provider creates customized and directed advertising targeted to that user." [0008]. In contrast, claims 11 and 18 recite that at least one of the ICM and Ad Center analyzes ads…to select personalized and localized ad content.

The ad center claimed in the present patent application (*see*, Claim 12) has six components dedicated to processing localized and personalized ads, which is different from the ad server disclosed by *Eyer et al.* (*see*, FIG. 2) because the ad server disclosed by *Eyer et al.* has only a single ad database with some target information (*see*, paragraph 0015). In contrast, the claimed ad center (*see*, Claim 12) does not store target information, and display of the proper ad is determined as part of the ad schedules by the ad control unit through the intelligent control module (ICM) (*see*, Claim 17). The decision-making unit inside the claimed ad center does not determine which ad to present to target viewers or target information. The distinction between the ad decision support unit inside the ICM (*see*, Claim 17) versus the ad output decision making unit inside the ad center (*see*, Claim 12) is very important. The ICM decision support unit determines the personalized and localized ads to be presented to viewers in the form of ad schedules. The ad output decision making unit makes the determinations on which ad to push to the ICM unit for local storage.

To highlight these distinctions, claims 11 and 18 now recite that <u>each ICM being configured to determine user personalized and localized ad schedules pertaining to channels and time</u>. In Eyer, "The TV service provider 20 selects the targeted advertisement to be transmitted…" [0016].

The user's personal and local attributes in the claimed invention are also different from the local user profile stored in the set-top box disclosed by *Eyer et al.* (*see*, paragraph 0017). The local in "local user profile" of *Eyer et al.* means it is local to a user's set-top box and is not related to the location-related attributes. The distinction between localized or location-based attributes versus

local user profiles is important because location-based or location-specific attributes add another dimension to target ads, which is in addition to said personal attributes or the user profile of *Eyer et al.*, which may contain information related to the viewer's stated preferences, leisure, and professional interests, etc. (*see*, paragraph 0016). Location-specific attributes enable target ads for viewers in a ski resort, a hotel location with a specific professional event, and many other user scenarios beyond personalized attributes. This is a significant difference compared to the local user profile disclosed by *Eyer et al.*

More particularly, page 4 of the Office Action states that Eyer receives local attributes. Rather paragraph [0017] of Eyer says that a "viewer's stated profile is obtained downloaded data from the user's local user profile 36, which is stored in the set-top box." Applicant's amended claims 11 and 18 now recite that the Ad Center receives location attributes from the ICMs. Eyer mentions personal data like leisure and professional interests, specific products interests and personal information [0016], but makes no mention of the user's location. Accordingly, Eyer cannot select localized ad content based on its corresponding location attributes, as currently recited in claims 11 and 18.

Eyer et al. does not disclose how to enable personalized and localized ads to targeted users. The method disclosed in *Eyer et al.* (*see*, Claims 13-22) describes an uploading and downloading mechanism between a T.V. service provider and set-top boxes. *Eyer et al.* does not disclose anything similar to the ICM of the claimed invention, which is one of the core pieces for enabling said personalized and localized ads.

Based on the four major differences discussed above between the claimed ad center and ICM compared to *Thukral*, in view of *Eyer et al.*, Applicants argue that the claimed ad center and ICM disclosed in Claims 11, 12, 17 and 18 constitutes a unique improvement over the prior art.

With regard to the Examiner's argument that the missing components that *Thukral*, in view of *Eyer et al.*, does not disclose – namely, analyzing ad agencies and advertisers, transmitting user ad search and follow-up requests, and software an firmware updates, can by achieved by combining U.S. Patent Publication No. 2002/008344, to *Blasko et al.*, in view of U.S. Patent Publication No. 2003/0229893), to *Sgaraglino*, in view of U.S. Patent Publication No. 2002/0078441), to *Drake*, Applicants also respectfully disagree.

As stated in the arguments submitted on July 23, 2010, the ad agency and advertiser analysis components disclosed by *Blasko* are for interactive analysis by the advertisers (*see*, paragraphs 0016, 0028-0031, 0039, 0044, and 0051), which is for advertising opportunities within the network (*see*, paragraph 0016). This is very different from the claimed analysis or decision support unit in the claimed ICM (*see*, Claim 17) or the decision making unit in the claimed ad center (*see*, Claim 12). The analysis does not require user interaction and is executed in the background and in real time inside an ICM enabled with expert business rules (*see*, Claim 17). This difference is very important because direct user interactions with the analysis component will not yield a realistic targeted ad system, which at peak times may need to support millions of viewers and tens of millions of ads on a given night. Only with non-interactive ad analysis, such as the claimed decision support units inside the claimed ICM or the claimed ad center, is it practical to support millions of users' personalized and localized ad needs.

With regard to user ad search and follow-up requests, the user ad search and follow-up requests disclosed by *Sgaraglino* are specifically targeted to the field of interactive advertising. The claimed user ad search and follow-up requests also has the methods described in Claims 19-22, which are not disclosed by *Sgaraglino*.

Claim 17 discloses the ICM components. Although the Examiner has acknowledged that *Thukral*, in view of *Eyer et al.*, in view of *Blasko*, in view of *Sgaraglino*, does not explicitly disclose the ICM (*see*, page 17 of the Office Action, dated August 24, 2010), Applicants stress, as stated in their previous arguments relating to the analysis of Claim 11, the following points: (1) The ad center disclosed by *Eyer et al.* is very different from the claimed ad center in that it does not contain a comparable ICM component; (2) the analysis component of *Blasko* is very different from the decision-supporting or decision-making units of the claimed invention; and (3) the user ad search and follow-up requests of *Sgaraglino* are different from the non-user interactive nature of the ad follow-up of the claimed invention.

In other words, Sgaraglino provides information in response to a user request. Combining this reference with Thurkral and Eyer does not overcome the deficiencies mentioned above, in which the references fail to received location attributes, and select ad content based on the corresponding personal and location attributes. As explained above, the Ad Server of Eyer would be located within the Content Provider 102 of Thukral. Since the Ad Content is delivered from the TV service provider, the prior art would not provide additional telecommunication sources. Indeed, Thurkral shows the set top boxes 110(1) connected to Content Provider 102 and Eyer shows the set top boxes 22 connected to Service Provider 20. Claims 11 and 18 recite one or more telecommunications sources connected to each user's ICM. The prior art only suggests one connection for each set top box to the TV service or content provider. Accordingly , the prior art does not allow users to follow-up and search for additional information through these multiple sources. Fig. 1 of the instant application, shows above ICM 2, these additional connections to TV Channels and the Internet. The Prior art does not show this degree of connectivity since it has

dedicated connections of the set top boxes to the TV service or content provider which includes the Ad Content and Ad Servers.

With regard to the decision support unit disclosed by U.S. Patent No. 7,243,362, to *Swix et al.*, the processor disclosed by *Swix et al.* (*see*, FIG. 3, processor 301c; column 4, lines 24-26; and column 5, lines 1-16) has several differences from the claimed ICM ad decision support unit of Claim 17 and the methods claimed in Claims 18-25. The decision support unit of Claim 17 outputs ad schedules pertaining to channels and time, whereas the processor disclosed by *Swix et al.* is used for data collection (*see*, FIG. 4, step 410; column 4, lines 24-26; and column 5, lines 3-5) for the ad insertion device (*see*, FIG. 3, 301d) to insert ad content into the broadcast content (*see*, FIG. 4, step 422). This difference is significant and important because the claimed decision support unit performs data collection for the user information unit (*see*, Claim 17), which also performs data collection from ad preference setup (*see*, Claim 17). Additionally, and more importantly, the output ad schedule of the claimed invention is independent of the ad insertion process as disclosed by *Swix et al.* (*see*, FIG. 4). In the claimed invention, ad schedule generation can be event triggered (*see*, Claim 17) or preprogrammed. The significance of separating personalized and localized ad schedule generation from ad insertion greatly reduces the potential performance and execution risks in reduction to practice because the data collection and decision making process can be performance intensive. If the decision making and data collection processes are part of the ad insertion process, as disclosed by *Swix et al.* (*see*, FIG. 4), it may potentially cause performance issues for real time ad insertion, since there can potentially be millions of users and user attributes, thousands of applicable ad content, and hundreds of localized attributes for the decision support unit to act on. The separation of ad schedule generation from ad insertion can significantly improve ad insertion performance, which is executed by the ad control unit of the ICM (*see*, Claim 17), since the ad

control unit inside the ICM must just perform a simple look-up of the ad schedule, while the ad schedule can be generated independently of the claimed ad insertion process and more effectively leverage ICM computing power.

The decision support unit of Claim 17 also interacts and makes a decision based on user preference set up and can be triggered based on events such as ads, user information insertion, change, or deletion (*see*, Claim 25), which is not disclosed by *Swix et al.*

The claimed decision support unit also determines personalized and localized ads based on a variety of methods, as described in Claims 19-25, which includes ad follow-up and searching inside the ICM (*see*, Claim 19), searching inside the ad center (*see*, Claim 21), or searching the ICM directly (*see*, Claim 22). These methods also include event-based triggering of the decision support mechanism within the ICM or ad center (*see*, Claims 23 and 24) and keeping synchronization between the ICM and the ad center of the data required for decision support (*see*, Claim 25). These methods are integral separate components, and the collective use of these methods forms flexible and robust ad decision support and follow-up processes for users interacting with the ICM, whereas the method disclosed by *Swix et al.* only focuses on a step-by-step ad insertion process, with no mention of the methods of Claims 19-25 of the present invention.

With regard to the Examiner's argument that U.S. Patent No. 6,698,020, to *Zigmond et al.*, discloses an event triggering mechanism that can be added directly to *Thukral*, in view of *Eyer et al.*, in view of *Blasko*, in view of *Sgaraglino*, in view of *Drake*, in view of *Swix et al.*, that is similar to the claimed event triggering mechanism of Claim 17 (*see*, page 19 of the Office Action of August 24, 2010), Applicants respectfully disagree because the two mechanisms are different. The event triggering mechanism disclosed by *Zigmond et al.* is triggered based on an event like a signal carried in the video programming feed, or on an external mechanism, such as information contained

in an electronic program guide for display on a video programming feed (*see*, column 4, lines 35-36), whereas the event triggering mechanism of Claim 17 of the present invention is based on deletion, addition, or change of event of the ad, user information, or attributes (*see*, Claim 25) for determination if the decision support engine needs to be re-run or to keep the ad schedule information up to date. This difference is very important because the events and event triggering mechanism disclosed by *Zigmond et al.* are not usable or relevant to ad schedule generation pertaining to a user's channels or time.

With regard to the Examiner's argument on page 20 of the Office Action that U.S. Patent Publication No. 2005/0188402, to *deAndrade et al.*, discloses a system wherein expert business rules and mathematical and statistical models are established based on user and ad attribute information and that with the teaching of the business rules of *deAndrade et al.* it would have been obvious to one of ordinary skill in the art to modify the system of *Thukral* to achieve the decision support unit of Claim 17 of the present invention, Applicants respectfully disagree for the following reasons.

Business rules, mathematical and statistical models are complex instruments that have many algorithms, are based upon tens of thousands of research papers, and require extensive research for the proper business rules mechanism and model to be discovered and applied. Just like the stochastic model in statistics or mathematics, which is used differently by various financial institutions on Wall Street (by people having Ph.D. degrees in math or statistics applying the model differently based on different financial factors), in math or statistics there are hundreds, if not thousands, of models or theories just like the stochastic model. Each model may have hundreds or thousands of business uses.

Business rules mechanisms, for example, are part of artificial intelligence (AI), a subject that can be supported by expert systems, neural networks, fuzzy logic, genetic algorithms, constraint-based systems, and many other AI mechanisms. Each mechanism in business rules already has thousands of Ph.D. or Masters-level research papers written on them, let alone the tens of millions of business rules systems implemented as information technology (IT) systems across millions of companies in the world because each company has its own business rules. With regard to business rules, mathematical models and statistical models in the ICM of the present invention (*see*, Claim 17) state that the ICM will leverage existing technologies in business rules, mathematical, and statistical models, which may have tens of millions of options or variations to be considered or implemented in reduction to practice, with the claimed system not being limited to one or two business rules mechanisms.

Business rules and mathematical models are utilized by every company if the world. Since every company has its own business rules or mathematical models, there is always uniqueness among the tens of millions of companies utilizing their own business rules. Just because Company A and Company B are both utilizing business rules, this does not mean that they are utilizing the same business rules in the same way.

The business rules disclosed by *Zigmond et al.* (*see*, paragraphs 0055-0120), which include a combination of business rules represented by XML, schema definitions in XSD (*see*, paragraph 0053), business requirements, and system components, etc., are unique to the business context, and there may be millions of variations or differences to the business rules and system disclosed by *Zigmond et al.* With regard to the ad follow-up and ad search unit disclosed by *Sgaraglino*, as referred to by the Examiner at page 21 of the present Office Action, and as argued by Applicants in their response filed July 23, 2010, with regard to Claims 11 and 17, there are differences between

the claimed ad follow-up and search unit and mechanisms of Claims 11, 17, 19, 20, 21, and 22, of the present invention and the disclosure of *Sgaraglino*.

In conclusion, because of the distinctive differences and unique improvements of the claimed system and method over the systems and methods disclosed in *Thukral*, *Eyer et al.*, *Blasko*, *Sgaraglino*, *Drake*, *Swix et al.*, *Zigmond et al.*, *deAndrade*, and U.S. Patent Publication No. 2002/0016972, to *Ogawa et al.*, it is not obvious to one of ordinary skill in the art by referencing the cited prior art to obtain the claimed system and method. Applicants also maintain that the unique integration of the claimed system components and method can potentially produce greatly improved personalized and localized ad delivery to users over the prior art and respectfully request allowance of the present patent application.

CONCLUSION

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to Applicants' representative's Deposit Account No. 50-5335.

Respectfully submitted,

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